



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

INJECTION WELL MONITORING REPORT

Form Approved  
OMB No. 2000-0042  
Approval expires 9-30-86

MIXED LAYER SYSTEM

YEAR 2017	MONTH	MONTH	MONTH
	Oct	Nov	Dec
Injection Pressure (PSI) (Line pressure out of Heat Exchanger)			
1. Minimum	58	58	45
2. Average	61	62	62
3. Maximum	62	64	64
Injection Rate (Gal/Min)			
1. Minimum	4,969	5,352	4,898
2. Average	5,222	5,600	5,216
3. Maximum	5,661	6,027	5,973
Annular Pressure (PSI)			
1. Minimum	N/A	N/A	N/A
2. Average	N/A	N/A	N/A
3. Maximum	N/A	N/A	N/A
Injection Volume (Gal) Expressed in MM Gals			
1. Monthly Total	225.59	241.92	225.33
2. Yearly Cumulative	3,041.59	3,283.51	3,508.84
Temperature (degF)			
1. Minimum	96	90	90
2. Average	98	97	93
3. Maximum	100	99	101
pH			
1. Minimum	8.10	8.26	8.14
2. Average	8.10	8.26	8.14
3. Maximum	8.10	8.26	8.14
Other Produced Fluid Volume - MM Gals	410.51	394.11	408.18
N/A - Not Applicable			
Name and Address of Permittee	Searles Valley Minerals P.O. Box 367, Trona, California 93562-0367		Permit Number CAS000000002
Name and Official Title (Please type or print) Dipti Barari, Supt.-Lake	Signature <i>Dipti Barari</i>		Date Signed 2/28/18



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

Form Approved  
OMB No. 2000-0042  
Approval expires 9-30-86

INJECTION WELL MONITORING REPORT

WARM BRINE CIRCULATION SYSTEM

YEAR 2017	MONTH	MONTH	MONTH
Injection Pressure (PSI) (Line pressure out of Heat Exchanger)	Oct	Nov	Dec
1. Minimum	41	29	27
2. Average	46	39	37
3. Maximum	55	47	55
Injection Rate (Gal/Min)			
1. Minimum	9,913	6,241	7,970
2. Average	10,168	9,921	9,985
3. Maximum	10,449	10,423	10,514
Annular Pressure (PSI)			
1. Minimum	N/A	N/A	N/A
2. Average	N/A	N/A	N/A
3. Maximum	N/A	N/A	N/A
Injection Volume (Gal) Expressed in MM Gals			
1. Monthly Total	439.26	428.59	431.35
2. Yearly Cumulative	4,587.26	5,015.84	5,447.20
Temperature (degF)			
1. Minimum	113	114	111
2. Average	117	114	118
3. Maximum	120	119	121
pH			
1. Minimum	9.20	9.20	9.09
2. Average	9.20	9.20	9.09
3. Maximum	9.20	9.20	9.09
Other Produced Fluid Volume - MM Gals	212.93	210.72	218.55
N/A - Not Applicable			
Name and Address of Permittee	Searles Valley Minerals P.O. Box 367, Trona, California 93562-0367		Permit Number CAS000000002
Name and Official Title (Please type or print)	Signature Dipti Barari	Date Signed 2/28/18	
Dipti Barari, Supt.-Lake			

**1. Injection Fluid Analysis, Part II, Section D, Item (a)**

**ANALYSIS OF MIXED LAYER INJECTION FLUID**

Analysis	Current Average	Current Minimum	Current Maximum	Previous Minimum	Previous Maximum	Within Previous Range *
%KCl	1.54	1.36	1.85	1.19	1.8	NO
%NaCl	10.54	9.65	12.3	8.67	11.48	NO
%Na <sub>2</sub> CO <sub>3</sub>	1.89	1.66	2.35	1.61	4.44	YES
%CO <sub>2</sub>	1.34	1.22	1.61	1.03	2.43	YES
%Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub>	.64	.57	.67	.53	.69	YES
%Na <sub>2</sub> SO <sub>4</sub>	4.66	4.49	5.19	3.82	5.45	YES

**ANALYSIS OF UPPER SALT WARM CIRCULATION BRINE (233wells)**

Analysis	Current Average	Current Minimum	Current Maximum	Previous Minimum	Previous Maximum	Within Previous Range *
%KCl	3.24	3.08	3.33	3.33	3.48	NO
%NaCl	18.21	17.84	18.42	18	19.01	NO
%Na <sub>2</sub> CO <sub>3</sub>	3.50	3.44	3.54	3.45	3.65	NO
%Na <sub>2</sub> B <sub>4</sub> O <sub>7</sub>	1.24	1.19	1.28	1.21	1.3	NO
%Na <sub>2</sub> SO <sub>4</sub>	6.83	6.65	7.01	6.44	7.15	Yes

NOTE: Sampling of Warm Circulation Brine for reporting purposes was initiated August 13, 1999.

\* "Previous Range Values" are those values, which were reported in the UIC Quarterly Report for the period ending June 2017.

The reported values are based on samples collected during the current quarter.

**2. Injection Well Monitoring Data, Part II, Section D, Item 1(b)**

Monitoring results of the injection and warm circulation fluids are reported on the attached copy of EPA Form 7520.8. Information pertaining to pressure of the Mixed Layer system is taken at the heat exchanger. Average injection rate is based on the average of daily readings taken each hour/ each day.

**3. *Monitoring Well Data, Part II, Section D, Item 1(c)***

Resultant data for Mixed Layer injection are presented in Tables 1 and 2.

**4. *Mechanical Integrity Test, Part II, Section D, Item 2(a)***

42 Mixed Layer wells were tested during this past quarter

**5. *Other Tests, Part II, Section D, Item 2(b)***

No other tests were conducted during this period.

**6. *Well Workover, Part II, Section D, Item 2(c)***

**TABLE 1 - MONITOR WELL DATA**

<u>Monitor Well Number</u>	<u>Fluid Level (Ft) *</u>	<u>Formation Pressure (PSI) *</u>	<u>Temperature (degF)</u>
LDW-2	INACCESSIBLE	N/R	N/A
LDW-5	Well plugged	N/R	N/A
LDW-6B	16.0	N/R	75.6
LDW-7	INACCESSIBLE	N/R	N/A
LDW-8	INACCESSIBLE	N/R	N/A
LDW-9	9.0	N/R	81.9
S-90B	13.0	N/R	78.6
254	INACCESSIBLE	N/R	N/A
350M	N/A	N/R	N/A
356	21.0	N/R	77.7
357A	24.0	N/R	75.4
357B	21.0	N/R	76.2
358MB	12.5	N/R	83.8
395	Plugged	N/A	N/A
505	14.0	N/R	74.3
508	14.0	N/R	79.3
551	7.0	N/R	80.1
551A	12.0	N/R	81.5
552	8.5	N/R	78.6
552A	8.0	N/R	78.6
553A	0	N/R	N/A
553B	INACCESSIBLE	N/R	N/A
511CC	INACCESSIBLE	N/R	N/A
511BB	4.0	N/R	75.4
593A	INACCESSIBLE	N/R	N/A
593B	21.0	N/R	73.2

N/R Not Required

N/A Not Available (Well inaccessible)

# SEARLES VALLEY MINERALS OPERATIONS INC.

TABLE 2 - MONITOR WELL DATA

<u>Monitor Well Number</u>	<u>Date</u>	<u>Time</u>	<u>Brine TDS (%)</u>
LDW-2	N/A	N/A	INACCESSIBLE
LDW-5	plugged		
LDW-6B	12/7//17	11:20 AM	31.48
LDW-7	N/A	N/A	PLUGGED
LDW-8	N/A	N/A	INACCESSIBLE
LDW-9	12/06/17	12:07pm	30.89
S-90B	6/03/17	09:02 AM	32.54
356	12/08//17	09:57 A. M	31.37
357A	12/08/17	8:07 A.M	31.66
357B	12/08/17	8:36 AM	31.81
358MB	12/08/17	11:00 AM	30.79
505	12/08/17	12:54 PM	30.54
508	12/08/17	10:00 AM	31.26
551	12/08/17	8:10 AM	26.99
551A	12/08/17	07:45 AM	30.17
552	12/07/17	12:30 PM	28.14
552A	6/03/17	12:25 PM	26.18
553A	N/A	N/A	N/A
511CC	N/A	N/A	N/A
511BB	N/A	N/A	INACCESSIBL
593A	N/A	N/A	INACCESSIBLE
593B	12/07/17	13:40 pM	27.72

Samples were collected by Daniel Foreman of Lake Development and were placed in plastic bottles and delivered to the designated in-house laboratory by truck.

### **Mixed Layer Injection Wells Inventory**

**No. of Subsided wells : 55**

**No. of Operating wells : 95**

**No. of Inactive wells : 55**

**Sum of total wells=150**

**Maximum Operating wells cap is at 212 wells.**